In the Claims

Please delete claims 1 and 16 and substitute claims 2-15 and 17 with the following:

2. (Amended) A combine harvester as in claim 17, wherein the setting of the sieve opening width and the rotational speed of the fan is effected automatically in dependence on the measuring signal from the load sensor.

3. (Twice Amended) A combine harvester as in claim 17, wherein the load sensor detects the amount of straw in a feeder housing of the combine harvester.

4. (Amended) A combine harvester as in claim 17, wherein the load sensor detects the moisture content of the straw.

5. (Amended) A combine harvester as in claim 17, wherein the load sensor detects the amount of crop being harvested.

6. (Amended) A combine harvester as in claim 17, wherein the load sensor detects the ground speed of the combine harvester.

7. (Amended) A combine harvester as in claim 17, wherein the setting of the opening width of the sieve device is dependent on the rotational speed of the fan.

8. (Amended) A combine harvester as in claim 17, including an evaluating unit for calculating a control signal representative of the desired cleansing setting by means of a programmed function in dependence on the measuring signal.

9. (Amended) A combine harvester as in claim 8, wherein the evaluating unit comprises a memory in which a plurality of previously determined dependencies between the desired sieve opening widths and/or the rotational speed of the fan and at least one measuring signal are stored in the form of a table or a characteristic curve or a family of characteristic curves, whereby the control signal is determined with the aid of the table or the characteristic curve.

10. (Amended) A combine harvester as in claim 8, wherein the evaluating unit determines the cleansing setting from a combination of several measuring signals.

11. (Amended) A combine harvester as in claim 8, wherein a new setting for the cleaning mechanism is produced by the evaluating unit in such a manner that the altered setting only becomes effective when the crop has traversed the path between the load sensor and the cleaning mechanism.

12. (Amended) A combine harvester as in claim 17, including means for altering the programmed function and the stored dependencies.

13. (Amended) A combine harvester as in claim 17, wherein the sieve device comprises an upper sieve and a lower sieve whose opening widths are each adjustable by means of a respective adjusting member whereby the opening width of the upper sieve and the opening width of the lower sieve are adjustable to different extents in dependence on the measuring signal.

14. (Amended) A combine harvester as in claim 13, wherein at least one of the upper and lower sieves comprises at least two sub-sieves whose opening widths are each adjustable by means of a respective adjusting member whereby the opening widths of the sub-sieves are adjustable to different extents in dependence on the measuring signal.

15. (Amended) A combine harvester as in claim 17, including means for restricting the possible adjustment ranges by predetermined limiting values.

17. (Twice Amended) A combine harvester incorporating a cleaning mechanism which comprises a sieve for cleaning the crop produced by a threshing and separating mechanism, a fan for forcing a blast of air through the sieve device, an adjusting member for automatically adjusting opening widths of the sieve device, at least one load sensor having a signal which is a measure of the loading to which the cleaning mechanism is subjected by the threshed crop, whereby the adjusting of the sieve opening width is effected automatically only in dependence on the measuring signal from the load sensor.